

Abstract of the Disclosure

A circuit for delivering a back-up stimulation voltage in a cycle to cycle capture test for an active implantable medical device such as a pacemaker, defibrillator and/or cardioverter or a multisite device having an enhanced circuit for delivering back-up stimulation pulses. This device comprises a first stimulation stage having: a output capacitor (12); a charging circuit (14) to charge the output capacitor to a first predetermined voltage (V1) for the stimulation that is close to the threshold of effectiveness for the stimulation of the patient; a first switch (18) that is able to connect the output capacitor to a stimulation terminal (16) of the device; a capture test circuit that is able to determine, after delivery of a stimulation, whether the stimulation was effective or if, on the contrary, there was loss of capture; a circuit for readjusting the stimulation voltage according to the result of the capture test; and a circuit able to deliver a backup-stimulation after the capture test if the result of the capture test reveals a loss of capture. The circuit for delivering a backup-stimulation includes an additional capacitor that is maintained charged, and a second switch (34), able to connect the additional capacitor to the aforementioned stimulation terminal (16) of the device to deliver the back-up stimulation pulse.